

## GENERAL NOTES

**Specifications:**

-SHA Specifications dated January, 2001  
-Revisions thereof and additions thereto and  
Special Provisions for Materials and Construction

AASHTO Standard Specifications for Highway Bridges  
dated 1996, including all Interim Specifications thru  
2000 (unless otherwise noted).

Concrete Design: Service load design method,  $f_c = 1200$  psi.

Reinforcing Steel Design:  $f_s = 24,000$  psi.

**Concrete:**

All structure concrete shall be Mix.No.3 (3500 psi) except  
as noted below under reinforcing steel.

**Reinforcing Steel:**

Reinforcing steel shall conform to A 615, Grade 60. All  
splices, not shown, shall be lapped as per Bar Lap Charts.  
Minimum cover for any bar shall be 2" unless otherwise  
noted, with the exception of bars at the bottom and sides of  
all footings which shall have 3" minimum cover.

If the front face of a retaining wall is within 5 ft. of a shoulder  
or lane, epoxy coated reinforcement shall be used in the  
front face of the stem and Mix.No.6 (4500 psi) concrete  
shall be used for the stem.

ONLY GRADE 60 CAN BE USED.

**Design Parameters:**

Earth pressure calculated based on Coulomb Theory.

Angle of Internal Friction:

33 degrees for excellent soil

30 degrees for good and poor soils (and all walls on pile footings)

Minimum Reinforcement [AAHSTO LRFD]  $P_{min.} = 0.03 f_c / f_y$ .

For Wall Types E and F, passive earth pressure from top  
of footing to bottom of shear key was utilized in the design.

APPROVAL	
<i>E.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES	
DATE: 7/8/83	
REVISIONS	
SHA	FHWA
7-16-02	.
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FHWA APPROVAL	.
DATE:	.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

STANDARD RETAINING WALL  
GENERAL NOTES

STANDARD NO. RW(6.02)-83-133

SHEET 11 OF 11

RETAINING WALLS